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08/561,665	11/22/95	KOENCK	S 10306US06

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ART UNIT

PAPER NUMBER

2111

DATE MAILED:

07/24/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/561,665

Applicant(s)

Koenck

Examiner

K. Shin

Group Art Unit

2111



☒ Responsive to communication(s) filed on Dec 15, 1995

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 49-60 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 49-60 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Part III DETAILED ACTION

Double Patenting

1. The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 49-60 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-43 of U.S. Patent No. 4,455,523.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons:

(1) While terminal device and conducting straps connecting the terminal device to the battery pack and a controller are not specifically claimed in the cited patent, it is notoriously well-known and the Examiner takes official notice that a terminal device (e.g. a calculator) is a type of an battery driven electronic device and conducting straps are used to connect different electronic circuits of a battery driven electronic devices in order to at least provide power thereto.

(2) Each of the claims in the present application are anticipated by or rendered obvious in view of claims 1-43 of U.S. Patent No. 4,455,523 which discloses and teaches a battery utilization device in which a microprocessor controls and monitors the charging/discharging of a battery pack connected to the battery utilization device via data based on said battery parameters.

For example, claim 10 broadly recites "battery monitoring means for sensing battery parameters and comprising memory means operatively coupled with said battery parameter sensing means and operative for storing data based on said battery parameters, charging control means operatively coupled with the battery means for controlling the rate of charging of said battery means... under respective varying conditions".

Interpreting such means plus function languages of claim 10 of the U.S. patent in light of its specification as directed by In re Donaldson, i.e. referring to Fig. 5 and Table A (processor command format) and Table B (battery processor data definitions), each of the claims in the present application are anticipated by or rendered obvious by claim 10 of the U.S. patent.

More specifically, claim 10 of the reference teaches monitoring means and charging control means which are interpreted to be a microprocessor (with memory) which monitors and controls the charging of a battery pack by processing and storing data based on the sensed battery parameters, under respective varying conditions of the battery as listed in Tables A and B. Further, claim 10's battery parameter

sensing means is interpreted to incorporate voltage, current and temperature sensing means as seen in Fig. 5. Claim 10 of the reference also recites a D/A converter (converting digital command signals of a microprocessor into analog voltages for controlling an electronic circuit or device) which forms one of the digital communication interface between the battery and the battery utilization device (terminal device). Claims 11-13 of the reference are directed to A/D converters (converting analog voltages from physical phenomenon sensing means (transducers) into digital form) and **memory** for storing raw digital data and processed data which are needed by the microprocessor for generating command signals (Table A) in order to control charging of the battery parameters by monitoring battery parameters such as temperature and current and voltage and data generated from such battery parameters as seen in Table B.

In particular, claims 56-58 claims a battery low capacity alerting procedure in the device. It would have been obvious to have such low capacity alerting procedure based on the teaching of Table A - command code 22, and Table B - minimum capacity alert @ col 15.

Similarly, claims 59-60 claims battery capacity monitoring procedure. It would have been obvious to have such battery capacity monitoring procedure based on the teaching of Table A - command code 30, and Table B - Fuel Gauge data @ col 17.

(3) Other claims of the U.S. patent specifically discloses and teaches the microprocessor monitoring and controlling the charging and discharging of the

battery in accordance with **data based on the battery parameters and the varying conditions of the battery.**

For example, U.S. patent has corresponding claims for the following listed claims of the present application:

Claim 50 additionally recites a memory for storing the battery parameters over time. (See claim 10 of U. S. patent for example.)

Claim 51 additionally states that microprocessor is capable of initiating a deep discharge. (See claim 34 for example.)

Claim 52 additionally recites that microprocessor measures battery capacity during deep discharge. (See claim 43 for example.)

Claim 53 additionally recites that microprocessor counts number of shallow discharge cycles. (See claim 37 for example.)

Claim 54 additionally recites that microprocessor initiates deep discharge based on number of shallow discharge cycles (See claim 34 and 37 - claim 37 teaches that battery discharging is controlled based on the number of shallow discharge counts.)

Claim 55 additionally recites that the microprocessor measures total current drained from the battery during use. (See claim 24 for example.)

3. Claims 49-60 are further rejected under the judicially created doctrine of double patenting over claims 1-43 of U. S. Patent No. 4,455,523 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Claims 1-43 of U.S. Patent No. 4,455,523 discloses and teaches a battery utilization device in which a microprocessor controls and monitors the charging/discharging of a battery pack connected to the battery utilization device via data based on said battery parameters.

For example, claim 10 fully covers claims 49-60 of the present application which present additional limitations because it broadly claims a battery utilization device in which a microprocessor controls and monitors the charging/discharging of a battery pack connected to the battery utilization device via data based on said battery parameters.

Because claim 10 (and other claims) of the patent utilizes an open-ended transitional phrase "comprising", it does not exclude presence of elements other than the limitations in the claim, and provides protection to disclosed claims of the patent and fully covers claims 49-60 of the present application.


If allowed, the claims of the application would provide patent protection to the presently claimed inventions in claims 49-60, but also would extend patent coverage to the disclosed claims 1-43 of U.S. Patent No. 4,455,523.

Thus, the controlling fact is that patent protection for the device, fully disclosed in and covered by the claims of the patent, would be extended by the allowance of the claims in the application.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner K. Shin whose telephone number is (703) 308-0711.

KCS
July 17, 1996


ROBERT NAPPI
PRIMARY EXAMINER
GROUP 2100